

Chapter 5 Populations**Section 5–1 How Populations Grow (pages 119–123)**

This section identifies the characteristics used to describe a population. It also describes factors that affect population size and explains what exponential growth and logistic growth are.

Characteristics of Populations (page 119)

- What are the four main characteristics of a population?
 - _____
 - _____
 - _____
 - _____
- What is a population's geographic distribution? _____

- Another term for geographic distribution is _____.
- What is population density? _____

- What is the equation with which you can calculate population density?

Population Growth (page 120)

- Circle the letter of each sentence that is true about populations.
 - They can grow rapidly.
 - They can decrease in size.
 - They may stay the same size from year to year.
 - They stay the same size until they disappear.
- What three factors can affect population size?
 - _____
 - _____
 - _____
- If more individuals are born than die in any period of time, how will the population change? _____
- Complete the table about changes in population.

CHANGES IN POPULATION

Type of Change	Definition	Resulting Change in Size
Immigration		
Emigration		

Exponential Growth (page 121)

10. How will a population change if there is abundant space and food and if the population is protected from predators and disease? _____

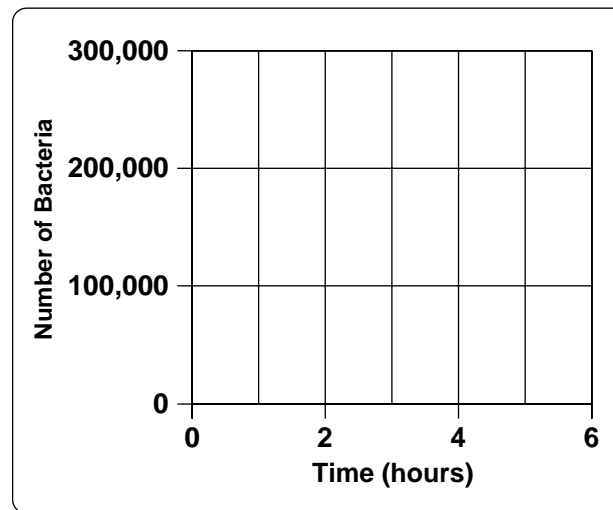
11. When does exponential growth occur? _____

12. What are three ways that a growth rate may be stated, or expressed? _____

13. Under ideal conditions with unlimited resources, how will a population grow? _____

14. Complete the graph by drawing the characteristic shape of exponential population growth.

Exponential Growth of Bacterial Population



15. Is the following sentence true or false? Elephants never grow exponentially because their rate of reproduction is so slow. _____

Logistic Growth (page 122)

16. Circle each sentence that is true about exponential growth.
 - a. It continues until the organism covers the planet.
 - b. It continues at the same rate as resources become less available.
 - c. It does not continue in natural populations for very long.
 - d. It continues in natural populations until the birthrate increases.
17. When resources become less available, how does population growth change?

Chapter 5, Populations *(continued)*

18. When does logistic growth occur? _____

19. Circle the letter of each instance when a population's growth will slow down.
- a. The birthrate and death rate are the same.
 - b. The birthrate is greater than the death rate.
 - c. The rate of immigration is equal to the rate of emigration.
 - d. The rate of emigration is less than the rate of immigration.
20. What is the carrying capacity of the environment for a particular species?

21. Complete the graph by drawing the characteristic shape of logistic population growth.

Logistic Growth of Yeast Population

